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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,242

11/28/2003

Shinichi Dosaka

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1647

1933

7590

08/03/2004

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EXAMINER

LUU, THANH X

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,242

Applicant(s)

DOSAKA ET AL.

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0304. 6) ☐ Other: .

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "an objective lens which irradiates the sample with" is incomplete.

Regarding claim 6, either "the fluorescent dyestuff" or "the reagent" lacks proper antecedent basis because in claim 5, "a fluorescent dyestuff" and "a reagent" are referred to in the alternative ("or").

Regarding claim 7, "the samples" and "the measuring" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 5 and 6, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Hanninen et al. (U.S. Patent 5,523,573).

Regarding claims 1, 3, 5 and 6, Hanninen et al. disclose (see Fig. 2) a fluorescence reader which detects fluorescence from a sample (N), comprising: a light source (L1) which radiates parallel light; a projection lens (O1) which converges the light from the light source; an objective lens (O3) which irradiates the sample; an image forming lens (O4) which forms fluorescence emitted from the sample and passed through objective lens into an image; a light receiving pinhole (A1) disposed in an image forming position of the image forming lines; and a detector (I1) which detects the fluorescence passed through the light receiving pinhole. The size of the image and the pinhole are substantially the same. Hanninen also disclose (see col. 1. lines 25-35) fluorescent dye coupled to DNA, the nucleic acid is inherently immobilized on the carrier.

6. Claims 1, 3 and 5-7, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Jarnagin et al. (U.S. Patent 6,238,874).

Regarding claims 1, 3 and 5-7, Jarnagin et al. disclose (see Fig. 6) a fluorescence reader which detects fluorescence from a sample (at 114), comprising: a light source (116) which radiates parallel light; a projection lens (117) which converges the light from the light source; an objective lens (122) which irradiates the sample; an image forming lens (122) which forms fluorescence emitted from the sample and passed through objective lens into an image; a light receiving pinhole (124) disposed in an image forming position of the image forming lines; and a detector (120) which

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detects the fluorescence passed through the light receiving pinhole. The size of the image and the pinhole are substantially the same. Jarnagin et al. also disclose (see col. 12, lines 65-66) fluorescent dye coupled to nucleic acids (in blood), the sample is inherently immobilized on the carrier. Jarnagin et al. further disclose (see Fig. 6) a plurality of samples and moving the sample (see col. 14, lines 55-56).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanninen et al.

Regarding claim 7, Hanninen et al. disclose the claimed invention as set forth above. Hanninen et al. do not specifically disclose a plurality of samples and moving the samples. However, micro-arrays are notoriously well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a plurality of samples and movement of the samples in the apparatus of Hanninen et al. to increase throughput and optimize detection.

9. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanninen et al. in view of Ballard (U.S. Patent 5,793,049)

Regarding claims 2 and 4, Hanninen et al. disclose the claimed invention as set forth above. Hanninen et al. do not specifically disclose an excitation pinhole or


changeable pinhole sizes. Ballard teaches (see Fig. 5) an adjustable pinhole (shutter 128) positioned to shape light from a light source. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide such a pinhole in the apparatus of Hanninen et al. to provide a desired beam shape and size.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Thanh X Luu
Primary Examiner
Art Unit 2878